



Natural Heritage &
Endangered Species
Program

Commonwealth of Massachusetts
Division of Fisheries & Wildlife
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MASSACHUSETTS SPECIES OF SPECIAL CONCERN

THE IMPERIAL MOTH

(Eacles imperialis)

Family - Saturniidae

Order - Lepidoptera

Class - Insects

DESCRIPTION: The Imperial Moth is a large yellow moth with a wingspan of 4 to 6 inches. The wings are variably marked with purplish dots and shading, and the hindwings are distinguished by the lack of a large eyespot.

RANGE: This species occurs from New England south to Florida, west to Texas, and north to Wisconsin.

DISTRIBUTION IN MASSACHUSETTS: There are pre-1970 records for this moth throughout the state, but the current records are much restricted despite widespread sampling for the distinctive moth. Since 1978 the moth has been collected on the island of Martha's Vineyard and in the town of Dartmouth in Bristol County.

HABITAT: This moth prefers pine stands, but may be found in a variety of forest types.

LIFE HISTORY AND ECOLOGY: Moths emerge in mid-summer. The larvae feed on many species of trees, although some prefer pine. Feeding continues until September, at which time the larvae pupate deep underground until the following spring.

POPULATION STATUS: The Imperial Moth is listed as a Species of Special Concern in Massachusetts due to its declining population and threats to its habitat, in the state and in other areas of its range. It may be extirpated in Connecticut where it was once common.

RECOMMENDATIONS: Present populations should be maintained and monitored while searching for new occurrences. Protection of forest habitat is also suggested. This species may be adversely affected by mosquito spraying and possibly gypsy moth spraying.

REFERENCES: Schweitzer, D. 1982. Eacles imperialis. Element Abstract. Massachusetts Natural Heritage Program. 7 pp.